

Chronic Disease Indicators: Indicator Definition



Hospitalization with diabetes

Category:	Diabetes
Demographic Group:	All resident persons.
Numerator:	Hospitalizations (not unduplicated*) with a principal or contributing diagnosis of International Classification of Diseases (ICD)-9-CM code 250. Search all diagnostic fields among residents during a calendar year. When possible, include hospitalizations for residents who are hospitalized in another state.
Denominator:	Midyear resident population for the same calendar year.
Measures of Frequency:	Annual number of hospitalizations. Annual hospitalization rate — crude and age-adjusted (standardized by the direct method to the year 2000 standard U.S. population, distribution 4†) — with 95% confidence interval.
Time Period of Case Definition:	Calendar year.
Background:	Approximately 500,000 hospitalizations/year have diabetes listed as the principal diagnosis, and 3.5 million have diabetes listed as at least one diagnosis on the hospital discharge abstract. Cardiovascular disease, kidney failure, amputations, and ketoacidosis are complications of diabetes that frequently require hospitalization.
Significance :	Long-term complications of diabetes requiring hospitalization can be prevented through glucose, lipid, and blood pressure regulation, as well as screening and treatment for eye, foot, and kidney abnormalities. Patient education, self-management, and medical care can prevent complications.
Limitations of Indicator:	Because diabetes is a chronic disease and approximately one third of cases are undiagnosed, years might pass before improvements in patient self-management and clinical practice affect diabetes-related hospitalization rates. The number of diagnoses listed on discharge abstracts might vary by person completing the abstract and geographic region of the U.S.
Data Resources:	State hospital discharge data (numerator) and population estimates from the U.S. Bureau of the Census or suitable alternative (denominator). http://www.cdc.gov/diabetes/statistics/
Limitations of Data Resources:	Diagnoses listed on hospital discharge data might be inaccurate. Practice patterns and payment mechanisms might affect decisions by health-care providers to hospitalize patients. Residents of one state might be hospitalized in another state and not be reflected in the first state's hospital data set. Multiple admissions for one person might falsely elevate the number of persons hospitalized. Because no universal availability of state hospital discharge data exists, aggregation of state data to produce nationwide estimates will be incomplete. If calculating this estimate within the diabetes population, restrict the denominator to only persons with diabetes.
Healthy People 2010 Objectives:	No objective.

* The term not unduplicated refers to the fact that one person might account for multiple admissions. † See Klein RJ, Schoenborn CA. Age adjustment using the 2000 projected U.S. population. Hyattsville, MD: US Department of Health and Human Services, CDC, National Center for Health Statistics, 2001. Healthy people 2010 statistical notes, no. 20
<http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>